

CLAIMS

What is claimed is:

1. A method of treating a cardiovascular disease comprising the step of administering to a subject an effective amount of a lactoferrin composition to provide an improvement in the cardiovascular disease in said subject.
2. The method of claim 1, wherein the cardiovascular disease is atherosclerosis.
3. The method of claim 1, wherein said lactoferrin composition reduces levels of circulating total cholesterol, low density lipoproteins (LDL), very low density lipoproteins (VLDL), or triglycerides in said subject.
4. The method of claim 1, wherein said lactoferrin composition increases the levels of circulating high density lipoproteins (HDL) in said subject.
5. The method of claim 1, wherein said lactoferrin composition reduces the levels of vascular inflammation in said subject.
6. The method of claim 1, wherein said lactoferrin composition reduces circulating C-reactive protein (CRP) in said subject.
7. The method of claim 1, wherein said lactoferrin composition reduces the proliferation of vascular smooth muscle cells in said subject.
8. The method of claim 1, wherein said lactoferrin composition reduces the vascular spasm or vascular hyper-reactivity in said subject.
9. The method of claim 1, wherein said lactoferrin composition promotes endothelial integrity or healing in said subject.
10. The method of claim 1, wherein said lactoferrin composition is dispersed in a pharmaceutically acceptable carrier.
11. The method of claim 1, wherein said lactoferrin is mammalian lactoferrin.
12. The method of claim 11, wherein said lactoferrin is human or bovine.

13. The method of claim 1, wherein said lactoferrin is recombinant lactoferrin.
14. The method of claim 1, wherein said lactoferrin composition comprises an N-terminal lactoferrin variant.
15. The method of claim 14, wherein the N-terminal lactoferrin variant lacks at least the N-terminal glycine residue.
16. The method of claim 15, wherein said N-terminal lactoferrin variant comprises at least 1% to at least 50% of the lactoferrin composition.
17. The method of claim 1, wherein said lactoferrin composition is administered parenterally.
18. The method of claim 17, wherein parenterally is subcutaneously, intramuscularly, intraperitoneally, intravenously, intraarterially, intramyocardially, transendocardially, transepically, or intrathecally.
19. The method of claim 1, wherein said lactoferrin composition is administered orally.
20. The method of claim 19 further comprising administering an antacid in conjunction with said lactoferrin composition.
21. The method of claim 19 further comprising administering the lactoferrin in a delayed release formulation.
22. The method of claim 21 where the lactoferrin release occurs in the small intestine.
23. The method of claim 21 where the lactoferrin release occurs in the large intestine.
24. The method of claim 1, wherein the amount of the lactoferrin that is administered is about 1 ng to about 20 g per day.
25. The method of claim 1, wherein the amount of the lactoferrin that is administered is about 0.1 g to about 5 g per day.
26. The method of claim 1, wherein said lactoferrin composition reduces the production or activity of pro-inflammatory cytokines.

27. The method of claim 1 further comprising administering a lactoferrin composition in combination with an anti-cholesterol agent or an anti-inflammatory agent.
28. The method of claim 27, wherein the anti-cholesterol agent is selected from the group consisting of cholesterol absorption inhibitors, bile acid sequestrants, nicotinic acid, fibric acids and HMG-coA reductase inhibitors.
29. The method of claim 28, wherein the bile acid sequestrants are selected from the group consisting of cholestyramine, cholestipol and colesevalam.
30. The method of claim 28, wherein the fibric acids are selected from the group consisting of gemfibrozil, fenofibrate and clofibrate.
31. The method of claim 28, wherein the HMG-coA reductase inhibitors are selected from the group consisting of lovastatin, pravastatin, simvastatin, fluvastatin, atorvastatin and cerivastatin.
32. A method of modulating atherosclerosis in a subject comprising the step of administering to said subject an effective amount of a lactoferrin composition to modulate atherosclerosis in said subject.
33. The method of claim 32, wherein modulating is reducing the incidence of atherosclerosis in said subject.
34. The method of claim 32, wherein modulating is reducing the severity of atherosclerosis in said subject.